

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Southwest Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

VP #8 (Deskins) - Island Creek Coal Company
State Route 620, Deskins, Buchanan County, Virginia
Permit No. SWRO10689

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Island Creek Coal Company has applied for a Title V Operating Permit for its VP #8, Deskins facility. The Department has reviewed the application and has prepared a Title V Operating Permit.

Engineer/Permit Contact: _____

Date: June 17, 2002

Air Permit Manager: _____

Date: June 17, 2002

Deputy Regional Director: _____

Date: June 17, 2002

FACILITY INFORMATION

Permittee

Island Creek Coal Company
P.O. Drawer L
Oakwood, VA 24631

Facility location

VP #8 (Deskins)
State Route 620
Deskins, Virginia

Facility ID No. 51-027-00047

SOURCE DESCRIPTION

SIC Code: 1222 - Coal preparation

The facility cleans and dries coal prior to shipment by railcar. The facility utilizes a thermal dryer to dry the coal cleaned by the wet process preparation plant that includes froth flotation and vacuum filtration.

Air emissions from the facility include Particulate Matter (PM), Particulate Matter less than 10 microns (PM-10) from all the dry processing units; Volatile Organic Compounds (VOC) from the thermal dryer and wet coal processing; and Nitrogen Oxides (NO_x), Sulfur Dioxide (SO₂), Carbon Monoxide (CO) and trace amounts of Hazardous Air Pollutants (HAP) from the thermal dryer.

The facility is a Title V major source of PM-10, NO_x, SO₂, VOC and CO. This source is located in an attainment area for all pollutants. The facility is permitted under a minor New Source Review (NSR) permit issued on June 19, 1975. A copy of the permit is included as an attachment.

COMPLIANCE STATUS

The facility is inspected at least once per year. Previous inspections have found the facility operating in compliance. According to the application the facility is in compliance with all applicable requirements.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant(s) Controlled
S001	Z01	Feeder to Rotary Breaker	750 TPH	Full Enclosure	D001	PM/PM-10
S002A	Z01	Rotary Breaker	750 TPH	Full Enclosure	D001	PM/PM-10
S002B	Z01	Crusher	300 TPH	Full Enclosure	D001	PM/PM-10
S003	Z01	Rotary Breaker to Conveyor No. 1	750 TPH	Full Enclosure	D001	PM/PM-10
S004	Z01	Conveyor No. 1 to Conveyor No. 2	750 TPH	Full Enclosure	D002	PM/PM-10
S005	Z01	Conveyor No. 2 to Raw Coal Silo	750 TPH	Full Enclosure	D003	PM/PM-10
S006	Z01	Raw Coal Silo to Conveyor No. 3	750 TPH	Full Enclosure	D003	PM/PM-10
S007	Z01	Conveyor No. 3 to Preparation Plant	750 TPH	Full Enclosure	D002	PM/PM-10
S008A	Z01	Froth Flotation	750 TPH	N/A	N/A	N/A
S008B	P001	Vacuum Filtration	750 TPH	N/A	N/A	N/A
S008C	P002	Thermal Dryer	475 TPH	Venturi Wet Scrubber	D004	PM, PM-10, SO ₂ , NO ₂
S008D	Z01	Thickener	750 TPH	N/A	N/A	N/A
S009	Z01	Conveyor No. 4 to Rail Car Loadout	600 TPH	Full Enclosure	D005	PM/PM-10
S010	Z01	Rail Car Loadout Spray System	600 TPH	N/A	N/A	N/A
S011	Z01	Rail Car Loading through Telescopic Chute	600 TPH	Telescopic Chute	D006	PM/PM-10
S012	Z01	Conveyor No. 4 to Conveyor No. 5	600 TPH	Full Enclosure	D005	PM/PM-10

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant(s) Controlled
S013	Z01	Conveyor No. 5 to Clean Coal Stockpile	600 TPH	N/A	N/A	N/A
S014	Z01	Clean Coal Stockpile	1.25 Acres	N/A	N/A	N/A
S015	Z01	Dozer Grading Clean Coal Stockpile	600 TPH	N/A	N/A	N/A
S016	Z01	Dozer Loading Stockpile Hopper	600 TPH	N/A	N/A	N/A
S017	Z01	Stockpile Hopper to Conveyor No. 5	600 TPH	Partial Enclosure	D007	PM/PM-10
S018	Z01	Conveyor No. 5 to Rail Car Loadout	600 TPH	Full Enclosure	D005	PM/PM-10
S019	Z01	Crusher to Conveyor No. 6	300 TPH	Full Enclosure	D001	PM/PM-10
S020	Z01	Conveyor No. 6 to Preparation Plant	300 TPH	Full Enclosure	D002	PM/PM-10
S021	Z01	Conveyor No. 7 to Refuse Bin	300 TPH	Partial Enclosure	D008	PM/PM-10
S022	Z01	Refuse Bin to Aerial Refuse Tram	300 TPH	Partial Enclosure	D008	PM/PM-10
S023	Z01	Aerial Refuse Tram to Mountain Top Refuse Bin	300 TPH	Partial Enclosure	D009	PM/PM-10
S024	Z01	Loading Refuse Trucks through Stationary Chute	300 TPH	Chute No. 1	D010	PM/PM-10
S025	Z01	Truck Dumping Refuse onto Ground	300 TPH	N/A	N/A	N/A
S026	Z01	Dozer Grading Refuse Pile	300 TPH	N/A	N/A	N/A
S027	Z01	Refuse Bin Chute Dumping onto Ground	300 TPH	N/A	N/A	N/A
S028	Z01	Loading Refuse Trucks by Endloader	300 TPH	N/A	N/A	N/A
S029	Z01	Endloader to Raw Coal Clean-up Chain Feeder	300 TPH	Partial Enclosure	D011	PM/PM-10
S030	Z01	Chain Feeder to Preparation Plant	300 TPH	Full Enclosure	D002	PM/PM-10

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant(s) Controlled
S031	Z01	Unpaved Roads	82,000 VMT	Water Spray	D012	PM/PM-10

EMISSIONS INVENTORY

A copy of the 1997 permit application emission inventory is included in the application. Emissions are summarized in the following table:

1997 Actual Emissions	Criteria Pollutant Emission in Tons/Year				
	VOC	CO	SO ₂	PM-10	NO _x
Total	14.4	21.0	34.6	28.4	38.3

The emission of HAPs is considered negligible.

EMISSION UNIT APPLICABLE REQUIREMENTS

Thermal Dryer - S008C - McNally #8 Flow Dryer

Limitations

There are no specific requirements from the minor New Source Review (NSR) permit issued on June 19, 1975.

The facility is subject to 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants. The following limitations apply to the thermal dryer, specifically:

Limit on particulate emissions of 0.031 gr/dscf.

Visible emission limit of 20%.

Monitoring

Subpart Y specifies the required monitoring as follows:

Continuous measurement of thermal dryer gas exit temperature.

Continuous measurement of pressure loss through the venturi scrubber.

Continuous measurement of the venturi water supply pressure.

The permit contains a requirement for weekly visual observations of the thermal dryer stack. If visible emissions are present during any of the observations, a six-minute visible emission evaluation must be performed in accordance with 40 CFR 60, Appendix A, Method 9. If during the six minutes, any readings above 20% opacity are noted, a one-hour VEE is required. A Method 9 evaluation will not be required if the visible emissions condition is corrected as expeditiously as possible such that no visible emissions exist; the emissions unit is operating at normal conditions; and, the cause and corrective measures taken are recorded. This will satisfy the periodic monitoring requirement for the visible emission limitation included in the permit.

The permit requires that a stack test for particulate matter be conducted prior to and within 12 months of submitting the renewal Title V application.

The emissions from the facility are not likely to exceed the emission standards listed above, with proper operation of the equipment and associated controls. Attachment A contains a comparison of thermal dryer particulate matter emissions as indicated by the most recent stack test data to the particulate matter emission limit. This comparison indicates compliance can be predicted.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include:

Visible emission observations and evaluations;

Annual cyclone inspections; and

Annual consumption of coal for the thermal dryer, calculated monthly as the sum of each consecutive 12-month period.

Testing

A table of test methods has been included in the permit. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No specific reporting requirements have been included in the permit for the thermal dryer.

Streamlined Requirements

The 20% opacity limit specified in 40 CFR 60, Subpart Y was used in lieu of the Chapter 50, Article 1 visible emission limit, since that limit allowed one six-minute period per hour of 30%.

Facility-wide Requirements

Limitations

The permit includes the coal processing and cleaning equipment as the facility-wide equipment.

The coal processing and cleaning equipment is subject to 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants. The following limitation applies to all coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems:

Visible emission limit of 20%.

The coal processing and cleaning equipment is also subject to 9 VAC 5, Chapter 40, Article 15, Emission Standards for Coal Preparation Plants. There are no emission limits for the coal processing equipment, however, only references to the normal existing rules for visible emissions, fugitive emissions and others. Since the visible emissions limitation from the NSPS is more stringent, that limitation is used.

Monitoring

The permit contains a requirement for weekly visual observations of the coal processing equipment. If visible emissions are present during any of the observations, a six-minute visible emission evaluation must be performed in accordance with 40 CFR 60, Appendix A, Method 9, on the emissions unit. If during the six minutes, any readings above 20% opacity are noted, a one-hour VEE is required. A Method 9 evaluation will not be required if the visible emissions condition is corrected as expeditiously as possible such that no visible emissions exist; the emissions unit is operating at normal conditions; and, the cause and corrective measures taken are recorded. This will satisfy the periodic monitoring requirement for the visible emission limitation included in the permit.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include:

Visible emission observations and evaluations.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

Facility-wide reporting requirements are discussed in the General Conditions sections below.

Streamlined Requirements

The 20% opacity limit specified in 40 CFR 60, Subpart Y was used in lieu of the Chapter 50, Article 1 visible emission limit, since that limit allowed one six-minute period per hour of 30%.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations that cause excess emissions for more than one hour, including those caused by upsets, within four daytime business hours.

STATE-ONLY APPLICABLE REQUIREMENTS

Island Creek Coal Company did not identify any state-only requirements in their application, and all requirements in the minor NSR permit are federally enforceable. Therefore, no state-only applicable requirements have been included in the permit.

FUTURE APPLICABLE REQUIREMENTS

Island Creek Coal Company did not identify any future applicable requirements in their application, and DEQ is unaware of any requirements that may apply during the life of the Title V permit. Therefore, no future applicable requirements have been included in the permit.

INAPPLICABLE REQUIREMENTS

Island Creek Coal Company did not identify any inapplicable requirements in their application. Therefore, no inapplicable requirements are included in the permit.

COMPLIANCE PLAN

Island Creek Coal Company is currently in compliance with all applicable requirements. No compliance plan was required in the application.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation ¹ (9 VAC)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
INS-01	Storage Tanks	5-80-720 B.2.	VOC	N/A
INS-02	Emergency Dryer Bypass	5-80-720 B	VOC, NO _x , SO ₂ , PM-10, CO	N/A
INS-03	Rock Dust Silo	5-80-720 B.1.	PM-10	N/A
INS-04	Magnetite Silo	5-80-720 B.1.	PM-10	N/A
INS-05	Thermal Dryer Pre-Igniter	5-80-720 B	VOC, NO _x , SO ₂ , PM-10, CO	N/A
S008A	Froth Flotation	5-80-720 B.2	VOC	N/A
S008B	Vacuum Filtration System	5-80-720 B.2	VOC	N/A
S008D	Thickener	5-80-720 B.2	VOC	N/A
S010	Rail Car Loadout Sprays	5-80-720 B.2	VOC	N/A

¹The citation criteria for insignificant activities is as follows:

9 VAC 5-80-720 B - Insignificant due to emission levels

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

A public notice regarding the draft permit was placed in the *The Virginia Mountaineer* newspaper in Grundy, Virginia on March 21, 2002. EPA was sent a copy of the draft permit and notified of the public notice on

March 15, 2002. The affected states, including West Virginia, Kentucky, North Carolina and Tennessee, were sent a copy of the public notice in a letter dated March 15, 2002. All persons on the Title V mailing list were sent a copy of the public notice by e-mail, fax or letter, dated no later than March 21, 2002.

Public comments were accepted from March 21, 2002, through April 19, 2002. No comments were received from the public or the affected states regarding the draft permit. EPA requested further information pertaining to thermal dryer particulate emissions. This information was incorporated into the Statement of Legal and Factual Basis as Attachment A. The EPA provided comments on the draft permit in a letter dated April 9, 2002. Responses to EPA comments can be found in the Response to Comments Document.

Attachment A

VP #8 (Deskins) - Island Creek Coal Company, Registration No. 10689 Thermal Dryer Particulate Emissions

Particulate emissions from the VP #8 (Deskins) thermal dryer will be compared to applicable particulate emission limits for a compliance determination. According to the permittee, the most recent emissions sampling that included particulate matter was conducted on the VP #8 (Deskins) thermal dryer from September 15 to September 19, 1997. The thermal dryer consists of a pulverized coal-fired furnace with a fluidized bed dryer. The system was designed by the McNally Corporation. Particulate emissions are controlled by a Flex-Kleen High-Energy Flooded Disc scrubber.

Particulate matter (PM) concentrations were determined as outlined in EPA Method 5. Four tests for particulate matter were conducted while the dryer was operating at maximum capacity. Test results are summarized as follows:

	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>
PM, grains/dscf	0.016	0.02	0.019	0.02
PM, lb/MMBtu	0.2	0.25	0.22	0.24
PM, lb/hr	17.5	21.7	20.8	21.1

Where: grains/dscf = grains per dry standard cubic foot,
lb/MMBtu = pounds per million British thermal units, and
lb/hr = pounds per hour.

Since the thermal dryer was constructed after 1974, the requirements of 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants, and 9 VAC 5-50-410 Subpart Y, Standards of Performance for Coal Preparation Plants are applicable. The particulate emission limit of 0.031 grains/dscf, as indicated by 40 CFR 60.252(a)(1), applies to the VP #8 (Deskins) thermal dryer. A comparison of the emission limit indicated by 40 CFR 60.252(a)(1) to the maximum emission rate of 0.02 grains/dscf from Run 2 and Run 3, indicates compliance can be predicted.